

AMENDMENTS TO THE CLAIMS

1-21. **(Canceled)**

22. **(Currently Amended)** An operation history utilization system which utilizes a user's operation history on a device, and provides the user with a service, the system comprising:

a device operable to transmit operation data that describes a user's operation details on said device; and

a service provision apparatus operable to (i) accumulate the operation data transmitted from said device as operation history data in chronological order, (ii) specify a frequent operation pattern which is a sequence of frequent operation history patterns based on the accumulated operation history data and (iii) provide a service according to the user's behavior predicted from the specified frequent operation pattern included in the accumulated operation history data,

wherein said service provision apparatus includes:

an operation history reception unit operable to receive the operation history data transmitted from said device;

an operation history database unit operable to accumulate the received operation history data;

a pattern extraction unit operable to extract the frequent operation pattern from the operation history data accumulated in said operation history database unit;

a pattern database unit operable to store the extracted frequent operation pattern;

a pattern monitor unit operable to monitor whether or not a sequence of operation history data newly received by said operation history reception unit corresponds to the frequent operation pattern stored in said pattern database unit;

a service provision unit operable to provide the service according to the user's behavior predicted from a result of the monitoring performed by said pattern monitor unit; and

a function database unit operable to store a predetermined relationship between an operation performed by said device and a function provided to the user in response to the operation,

wherein said pattern extraction unit is operable to compare the operation history data accumulated in said operation history database unit with a predetermined relationship in said function database unit, convert the operation history data into a sequence of functions, extract a frequent operation pattern from the sequence of functions, and store the extracted frequent operation pattern into said pattern database unit, and

the function provided to the user is a main function associated with a name of said device, and the operation history data converted into the sequence of functions is used for predicting the user's behavior.

23. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said service provision apparatus includes:

a user server apparatus which (i) accumulates the operation history data, (ii) specifies the frequent operation pattern based on the accumulated operation history data and (iii) predicts the user's behavior from the specified frequent operation pattern; and

an application server apparatus which provides service according to the user's behavior predicted by said user server apparatus.

24. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said service provision apparatus includes:

a user server apparatus which accumulates the operation history data; and

an application server apparatus which (i) specifies the frequent operation pattern based on the operation history data accumulated in said user server apparatus, (ii) predicts the user's behavior from the specified frequent operation pattern and (iii) provides service according to the predicted user's behavior.

25. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said device includes:

an operation history storage unit operable to store operation history data in which a date and a time of an operation are stored in association with details regarding a performed operation performed; and

an operation history transmission unit operable to transmit operation history data to said service provision apparatus at a predetermined timing, the operation history data being stored in said operation history storage unit.

26. **(Previously Presented)** The operation history utilization system according to Claim 25, wherein said device further includes a viewing history storage unit operable to store viewing history data related to content viewed by the user, and

said operation history transmission unit is operable to transmit, to said service provision apparatus, the viewing history data stored in said viewing history storage unit together with the operation history data.

27. **(Previously Presented)** The operation history utilization system according to Claim 25, wherein said device further includes a user identification unit operable to identify the user who performed the operation, and

said operation history storage unit is operable to store a result identified by said user identification unit as a part of the operation history.

28. **(Previously Presented)** The operation history utilization system according to Claim 25, wherein said device is operable to store information as a part of an operation history into said operation history storage unit, the information describing a communication partner.

29-30. **(Canceled)**

31. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said service provision apparatus includes:
- a viewing history reception unit operable to receive viewing history data transmitted together with the operation history data from said device; and
 - a viewing history database unit operable to accumulate the received viewing history data,
- and
- said pattern extraction unit is operable to extract a frequent pattern from both of the operation history data accumulated in said operation history database unit and the viewing history data accumulated in said viewing history database unit.
32. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said pattern extraction unit is operable to utilize information regarding the user operating said device so as to extract the frequent operation pattern, the information being transmitted from said device.
33. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said pattern extraction unit is operable to utilize information regarding a communication partner so as to extract the frequent operation pattern, the information being transmitted from said device.
34. **(Previously Presented)** The operation history utilization system according to Claim 22, comprising a plurality of devices which transmit respective operation data describing the details of the user's operation,
- wherein said service provision apparatus is operable to (i) accumulate operation data transmitted from the plurality of devices as operation history data in chronological order, (ii) specify a frequent operation pattern based on the accumulated operation history data and (iii) provide a service according to the user's behavior predicted from the specified frequent operation pattern.

35. **(Previously Presented)** The operation history utilization system according to Claim 22, wherein said serviced provision apparatus provides the service by automatically controlling said device according to the frequent operation pattern.

36. **(Currently Amended)** An operation history utilization method for utilizing a user's operation history and providing the user with service, the method comprising steps of:

- transmitting operation data that describes details regarding the user's operation details on a device, said transmitting being performed by the device;
- accumulating the operation data transmitted from the device as operation history data in chronological order;
- specifying a frequent operation pattern which is a sequence of frequent operation history patterns based on the accumulated operation history data; and
- providing service according to the user's behavior predicted from the specified frequent operation pattern included in the accumulated operation history data;
- receiving operation history data transmitted from the device;
- accumulating the operation history data received from the device in an operation history database unit;
- extracting the frequent operation pattern from the operation history data accumulated in the operation history database unit using a pattern extracting unit;
- storing the extracted frequent operation pattern in a pattern database unit;
- monitoring whether or not a sequence of newly received operation history data from said device corresponds with the frequent operation stored in said pattern database unit;
- providing the service according to the user's behavior predicted from a result of the performed monitoring; and
- storing in a function database unit a predetermined relationship between an operation performed by the device and a function provided to the user in response to the operation,

wherein the pattern extraction unit compares the operation history data accumulated in the operation history database unit with a predetermined relationship in the function database unit, converts the operation history data into a sequence of functions, extracts a frequent operation pattern from the sequence of functions, and stores the extracted frequent operation pattern into said pattern database unit, and

the function provided to the user is a main function associated with a name of said device, and the operation history data converted into the sequence of functions is used for predicting the user's behavior.

37. **(Previously Presented)** The operation history utilization method according to Claim 36, the method comprising:

storing operation history data in which a date and a time of an operation in association with details of a type of operation; and

transmitting the stored operation history data from said device at a predetermined timing.

38-39. **(Canceled)**

40. **(Currently Amended)** A service provision apparatus which provides a user with service by utilizing the user operation history on a device, the apparatus comprising:

a reception unit operable to receive operation data describing the user's operation details transmitted from the device; and

a service provision unit operable to accumulate the received operation data as operation history data in chronological order, to specify a frequent operation pattern which is a sequence of frequent operation patterns based on the accumulated operation history data, and to provide service according to the user's behavior predicted from the specified frequent operation pattern,

wherein said service provision apparatus includes:

an operation history reception unit operable to receive the operation history data transmitted from said device;

an operation history database unit operable to accumulate the received operation history data;

a pattern extraction unit operable to extract the frequent operation pattern from the operation history data accumulated in said operation history database unit;

a pattern database unit operable to store the extracted frequent operation pattern;

a pattern monitor unit operable to monitor whether or not a sequence of operation history data newly received by said operation history reception unit corresponds to the frequent operation pattern stored in said pattern database unit;

a service provision unit operable to provide the service according to the user's behavior predicted from a result of the monitoring performed by said pattern monitor unit; and

a function database unit operable to store a predetermined relationship between an operation performed by said device and a function provided to the user in response to the operation,

wherein said pattern extraction unit is operable to compare the operation history data accumulated in said operation history database unit with a predetermined relationship in said function database unit, convert the operation history data into a sequence of functions, extract a frequent operation pattern from the sequence of functions, and store the extracted frequent operation pattern into said pattern database unit, and

the function provided to the user is a main function associated with a name of said device, and the operation history data converted into the sequence of functions is used for predicting the user's behavior.

41. **(Canceled)**

42. **(Currently Amended)** A program for a service provision apparatus which provides a user with service by utilizing the user's operation history on a device, the program causing a computer to execute steps of:

receiving operation data describing the user's operation transmitted from said device; and

accumulating the received operation data as operation history data in chronological order, specifying a frequent operation pattern which is a sequence of frequent operation history data based on the accumulated operation history data, and providing service according to the user's behavior predicted from the specified frequent operation pattern;

receiving operation history data transmitted from the device;

accumulating the operation history data received from the device in an operation history database unit;

extracting the frequent operation pattern from the operation history data accumulated in the operation history database unit using a pattern extracting unit;

storing the extracted frequent operation pattern in a pattern database unit;

monitoring whether or not a sequence of newly received operation history data from said device corresponds with the frequent operation stored in said pattern database unit; and

providing the service according to the user's behavior predicted from a result of the performed monitoring; and

storing in a function database unit a predetermined relationship between an operation performed by the device and a function provided to the user in response to the operation,

wherein the pattern extraction unit compares the operation history data accumulated in the operation history database unit with a predetermined relationship in the function database unit, converts the operation history data into a sequence of functions, extracts a frequent operation pattern from the sequence of functions, and stores the extracted frequent operation pattern into said pattern database unit, and

the function provided to the user is a main function associated with a name of said device, and the operation history data converted into the sequence of functions is used for predicting the user's behavior.